

	Sample medium/ constituent(s)	Sampling frequency/ number of sites	**Preparation of QAPPs/SAPs	Collection/ processing of samples	Sample shipping	Laboratory analysis	***QA review and upload of data to WQX Portal	Comments
1	Nutrients	Monthly; 3 sites	ACOE	ACOE	ACOE	ACOE	ACOE	Frequency rationale: established baseline monitoring BC sampling manual
2	Water chemistry (anions, cations, total metals)	Monthly; 3 sites	ACOE	ACOE	ACOE	ACOE	ACOE	Frequency rationale: established baseline monitoring BC Sampling manual. Standard operating procedure: Mike/Aaron
3	Particulate Se	4x/yr (based on hydrograph- e.g. Apr; May; late June-early July; Aug/Sept); 2 sites (Border, Forebay), 2 depths	ACOE	ACOE	Teck ¹	Teck ²	ACOE	Should be collected at the same time as dissolved Se. Frequency rationale: recommended baseline sampling until Se waste stream stabilizes, then frequency could be reduced. MT DEQ Quality Assurance Project Plan
4	Dissolved Se	Monthly; 3 sites, 2 depths	ACOE	ACOE	ACOE	ACOE	ACOE	Same time as particulates. Frequency rationale: established baseline monitoring. BC sampling manual
5	Continuous depth profiles (1- meter intervals)	Monthly; 3 sites	ACOE	ACOE			ACOE	Same time as dissolved/ particulate. Rationale: consistent with USGS and data was valuable. Rationale for US border location – continue consistency with long-term data set; enable Clean Water Act assessment decisions by MDEQ. Frequency rationale: recommended baseline sampling until Se waste treatment stabilizes, then frequency could be reduced. Teck only does at biological sampling locations. Shari to provide SOP
6	Zooplankton	Quarterly; 3 sites	ACOE	ACOE	ACOE	ACOE	ACOE	Frequency rationale: consistency with baseline for past 2 years. Could be altered to a frequency of 4x/year. Shari to pull SOP from Koocanusa study design
7	Surface and benthic macroinvertebrates	2x/year	Teck	Teck	Teck	Teck	Teck	Frequency rationale: Captures 2 seasons, spring and fall. Requesting surface tows – consistent with past sampling and shoreline sampling is not effective on US side due to steep sandy banks. Surface benthics: need US QAPP/DEQ

December 11, 2018

								At depth benthic: Shari to share SOP
8	Fish	Annual at Rexford fish population gillnet site	FWP/Teck	Teck in coordination with FWP	Teck	Teck	Teck	Frequency rationale: 2x/yr (spring and fall) consistent with Teck sampling and consistent with FWP/DEQ past sampling efforts. Locations consistent with past efforts. Target species to be discussed annually by project team. Shari to send the SOP

KOOCANUSA SAMPLING PROGRAM OVERVIEW 2019-2020

**It is expected that QAPPs/SAPs would be developed consistent with DQOs established by project team
***It is expected that project team would establish a time frame for data upload following receipt of lab results.

¹Propose Teck cover shipping costs via direct payment to Fed Ex.
²Propose Teck reimburse analytical costs directly to Laboratories. Estimated cost= \$3000 to GA State for sample processing and shipping to Brooks Analytical; \$3000 to Brooks Analytical for analysis